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PA - (SHIE ) SHINETSU CHEM IND CO LTD

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XIC - C08G-064/10 ; C08K-003/22 ; C08K-005/09 ; C08K-005/42 ; C08L-025/04 ; (  
C08L-025/04 C08L-083/07) ; (C08L-025/04 C08L-069/00 C08L-083/07) ; (  
C08L-025/04 C08L-043/04 C08L-069/00)

AB - J06128434 A flame retardant resin compsn. comprises; 100 pts. wt. of  
(A) a thermoplastic styrene resin; 1 to 50 (pref. 5 to 10) pts. wt. of  
(B) an organopolysiloxane resin which contains a  $\text{CH}_2=\text{CHSiO}_{1.5}$  unit or  
 $\text{CH}_2=\text{CH}(\text{CH}_3)\text{SiO}$  unit and has a molecular weight of 500 to 100,000  
(pref. 1,000 to 20,000); 0.1 to 20, (pref. 0.2 to 10) pts. wt. of (C)  
at least one flame retarder selected from potassium perfluoroalkane  
sulphonate, brominated polycarbonate resin and magnesium carboxylate;  
and 0 to 200 pts. wt. of (D) a mineral hydroxide.

- Also claimed are compsns. where; (B) has  $\text{CH}_2=\text{CHSiO}_{1.5}$  unit or  
 $\text{CH}_2=\text{CH}.\text{CH}_3\text{SiO}$  unit and  $\text{C}_6\text{H}_5\text{SiO}_{1.5}$  unit; (B) has  $\text{CH}_2=\text{CHSiO}_{1.5}$  unit or  
 $\text{CH}_2\text{CH}.\text{CH}_3\text{SiO}$  unit and  $(\text{C}_6\text{H}_5)_2\text{SiO}_2$  unit; (B) has  $\text{CH}_2=\text{CHSiO}_{1.5}$  unit or  
 $\text{CH}_2=\text{CH}.\text{CH}_3\text{SiO}$  unit and  $\text{C}_6\text{H}_5.\text{CH}_3\text{SiO}$  unit; or (B) has  $\text{CH}_2=\text{CHSiO}_{1.5}$  unit  
or  $\text{CH}_2=\text{CH}.\text{CH}_3\text{SiO}$  unit,  $\text{SiO}_2$  unit and  $(\text{CH}_3)_3\text{SiO}_{0.5}$  unit.

- Pref. (A) is polystyrene, high-strength polystyrene, butadiene-styrene  
copolymer, acrylonitrile-styrene copolymer and  
acrylonitrile-butadiene-styrene copolymer. (B) includes a hydrolysate  
or chlorosilane or alkoxysilane, an equilibrated product of cyclic  
siloxane, etc. The terminal gp. may be silanol, methoxy, ethoxy,  
isopropoxy or isobutoxy gp. Pref. (C) is potassium perfluorobutane  
sulphonate and magnesium stearate. Pref. (D) is aluminium hydroxide  
and magnesium hydroxide.

- ADVANTAGE - The flame retardant resin compsn. has high safety as it  
generates no harmful gas and shows reduced dripping on combustion.

- In an example, formulation comprised; 100 pts. wt. of standard grade  
polystyrene; 10 pts. wt. of organopolysiloxane resin of formula  
 $(\text{C}_6\text{H}_5\text{SiO}_{1.5})_{0.8}(\text{CH}_2=\text{CHSiO}_{1.5})_{0.2}$ ; 0.5 pt. wt. of potassium  
perfluorobutane sulphonate; and 100 pts. wt. of aluminium  
hydroxide.(Dwg.0/0)

REL25/04 C08L43/04 C08L08/00

1W - FLAME RETARD RESIN COMPOSITION COMPRISE THERMOPLASTIC POLYSTYRENE  
RESIN ORGANO POLYSILOXANE RESIN FLAME RETARD METAL HYDROXIDE REDUCE  
HARM GAS DRIP COMBUST

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NC - 001

OPD - 1992-10-16

ORD - 1994-05-10

PAW - (SHIE ) SHINETSU CHEM IND CO LTD

TI - Flame retardant resin compsn. - comprises thermoplastic styrene]  
resin, organo:polysiloxane resin, flame retarder and metal hydroxide  
for reduced harmful gas and dripping on combustion